

What is claimed is:

1. A method of inhibiting growth of an autologous tumor in a mammal, comprising administering to said mammal a composition comprising taurolidine or a biologically active derivative thereof.

5                   2. The method of claim 1, wherein said tumor is a tumor of the central nervous system.

3. The method of claim 1, wherein said tumor is a neuroblastoma.

4. The method of claim 1, wherein said tumor is an astrocytoma.

5. The method of claim 1, wherein said tumor is carcinomatous meningitis.

10                  6. The method of claim 1, wherein said tumor is a CNS lymphoma.

7. The method of claim 1, wherein said tumor is a glioma.

8. The method of claim 1, wherein said composition is administered at a dose sufficient to induce tumor cell death by apoptosis.

15                  9. The method of claim 1, wherein said composition is administered at a dose at which a tumor cell preferentially undergoes apoptosis compared to necrosis.

10. The method of claim 1, wherein said composition comprises taurolidine.

11. The method of claim 1, wherein said composition comprises a taurolidine derivative or metabolite.

20                  12. The method of claim 1, further comprising administering a chemotherapeutic agent selected from the group consisting of an antimetabolite, a purine or pyrimidine analogue, an alkylating agent, an intercalating agent, a crosslinking agent, and an antibiotic.

25                  13. A method of growth of an autologous tumor in a mammal, comprising administering to said mammal a composition comprising taurultam or a biologically active derivative thereof.

14. The method of claim 13, wherein said tumor is a tumor of the central nervous system.

15. The method of claim 13, wherein said tumor is a neuroblastoma.

16. The method of claim 13, wherein said tumor is an astrocytoma.

5 17. The method of claim 13, wherein said tumor is carcinomatous meningitis.

18. The method of claim 13, wherein said tumor is a CNS lymphoma.

19. The method of claim 13, wherein said tumor is a glioma.

20. The method of claim 13, wherein said composition is administered at a dose sufficient to induce tumor cell death by apoptosis.

10 21. The method of claim 13, wherein said composition is administered at a dose at which a tumor cell preferentially undergoes apoptosis compared to necrosis.

22. The method of claim 13, wherein said composition comprises taurultam.

23. The method of claim 13, wherein said composition comprises a taurultam derivative or metabolite.

15 24. The method of claim 13, further comprising administering a chemotherapeutic agent selected from the group consisting of an antimetabolite, a purine or pyrimidine analogue, an alkylating agent, an intercalating agent, a crosslinking agent, and an antibiotic.

20 25. A method of inhibiting growth of a drug resistant tumor in a mammal, comprising administering to said mammal a composition comprising taurolidine or a biologically active derivative thereof.

26. The method of claim 25, wherein said drug resistant tumor is selected from the group consisting of a solid tumor, a non-solid tumor, and a lymphoma.

27. The method of claim 25, wherein said drug resistant tumor is a carcinoma.

28. The method of claim 25, wherein said drug resistant tumor is a sarcoma.

29. The method of claim 25, wherein said drug resistant tumor is selected from the group consisting of breast cancer, ovarian cancer, colon cancer, prostate cancer, pancreatic cancer, CNS cancer, liver cancer, lung cancer, gastric cancer, esophageal cancer, urinary bladder cancer, melanoma, leukemia, and lymphoma.

30. The method of claim 25 wherein said composition is administered at a dose sufficient to induce tumor cell death by apoptosis.

31. The method of claim 25, wherein said compound is administered at a dose at which a tumor cell preferentially undergoes apoptosis compared to necrosis.

32. The method of claim 25, wherein said composition comprises taurolidine.

33. The method of claim 25, wherein said composition comprises a taurolidine derivative.

34. The method of claim 25, further comprising administering a chemotherapeutic agent selected from the group consisting of an antimetabolite, a purine or pyrimidine analogue, an alkylating agent, intercalating agent, crosslinking agent, and an antibiotic.

35. A method of treating a drug resistant tumor in a mammal, comprising administering to said mammal a composition comprising taurultam or a biologically active derivative thereof.

36. The method of claim 35, wherein said drug resistant tumor is selected from the group consisting of a solid tumor, a non-solid tumor, and a lymphoma.

37. The method of claim 35, wherein said drug resistant tumor is a carcinoma.

38. The method of claim 35, wherein said drug resistant tumor is a sarcoma.

39. The method of claim 35, wherein said drug resistant tumor is selected from the group consisting of breast cancer, ovarian cancer, colon cancer, prostate cancer,

pancreatic cancer, CNS cancer, liver cancer, lung cancer, gastric cancer, esophageal cancer, urinary bladder cancer, melanoma, leukemia, and lymphoma.

40. The method of claim 35 wherein said composition is administered at a dose sufficient to induce tumor cell death by apoptosis.

5                   41. The method of claim 35, wherein said compound is administered at a dose at which a tumor cell preferentially undergoes apoptosis compared to necrosis.

42. The method of claim 35, wherein said composition comprises taurultam.

43. The method of claim 35, wherein said composition comprises a taurultam derivative.

10                   44. The method of claim 35, further comprising administering a chemotherapeutic agent selected from the group consisting of an antimetabolite, a purine or pyrimidine analogue, an alkylating agent, intercalating agent, crosslinking agent, and an antibiotic.

15                   45. A method of killing a tumor cell in a mammal, comprising administering to said mammal a composition comprising taurolidine, taurultam or a biologically active derivative thereof, wherein said composition is administered to directly contact the surface said tumor cell at a dose sufficient to induce tumor cell death by apoptosis.

46. The method of claim 45, wherein said composition comprises taurolidine.

47. The method of claim 45, wherein said composition comprises taurultam.

20                   48. The method of claim 45, wherein said tumor cell is derived from a solid tumor, non-solid tumor, or lymphoma.

49. The method of claim 45, wherein said tumor cell is a carcinoma.

50. The method of claim 45, wherein said tumor cell is a sarcoma.

25                   51. The method of claim 45, wherein said tumor cell is of a type selected from the group consisting of breast cancer, ovarian cancer, colon cancer, prostate cancer,

pancreatic cancer, CNS cancer, liver cancer, lung cancer, gastric cancer, esophageal cancer, urinary bladder cancer, melanoma, leukemia, and lymphoma.

52. The method of claim 45, wherein said tumor cell is a urinary bladder carcinoma.

5 53. The method of claim 52, wherein said bladder is inflated with a solution comprising said composition.

54. The method of claim 45, wherein said tumor cell is a malignant skin cell.

55. The method of claim 54, wherein said malignant skin cell is a basal cell carcinoma or a squamous cell carcinoma.

10 56. The method of claim 54, wherein said malignant skin cell is a melanoma, sarcoma, or lymphoma.

57. The method of claim 54, wherein said composition is formulated in an ointment, said ointment being administered directly to said malignant skin cell.

58. The method of claim 45, wherein said tumor cell is a liver cancer.

15 59. The method of claim 45, wherein said composition is administered by infusion into a blood vessel of the liver.

60. The method of claim 45, wherein said composition is administered by infusion into the hepatic artery.

20 61. The method of claim 45, wherein said composition is administered by infusion into the portal vein.

62. A method of purging a population of bone marrow cells of tumor cells *ex vivo*, comprising contacting said population with a composition comprising taurolidine, taurultam, or a biologically active derivative thereof.

63. The method of claim 62, wherein said composition comprises taurolidine.

25 64. The method of claim 62, wherein said composition comprises taurultam.

65. The method of claim 62, wherein said population is contacted with an amount of said composition sufficient to induce tumor cell death by apoptosis.

66. The method of claim 62, wherein said population is contacted with an amount of composition which preferentially induces apoptosis in said tumor cells compared to necrosis of said tumor cells.

67. A method of purging a population of peripheral blood mononuclear cells of tumor cells, comprising contacting said population with a composition comprising taurolidine, taurultam, or a biologically active derivative thereof.

68. The method of claim 67, wherein said composition comprises taurolidine.

69. The method of claim 67, wherein said composition comprises taurultam.

70. The method of claim 67, wherein the number of tumor cells in said population is reduced by at least five log units.

71. A therapeutic film-forming composition comprising taurolidine, taurultam, or a biologically active derivative thereof.

72. The composition of claim 71, wherein said compound is in the form of an ointment, paste, spray, patch, cream, gel, resorbable sponge, or foam.

73. The composition of claim 71, wherein said compound is in the form of an adhesive patch.

74. A method of treating a tumor in a mammal, comprising contacting a tumor cell in said mammal with a composition comprising taurolidine, taurultam, or a biologically active derivative thereof in an amount sufficient to initiate transduction of a cell surface signal, wherein said signal induces apoptotic death of said cell.

75. The method of claim 74, wherein said composition comprises taurolidine.

76. The method of claim 74, wherein said composition comprises taurultam.

77. A method of inhibiting growth of a myelodysplastic cell in a mammal, comprising administering to said mammal a composition comprising taurolidine, taurultam, or a biologically active derivative thereof .